

## **CLAIMS LISTING**

**1. (Previously Presented)** A collaborative filtering system embodied on a computer readable medium, comprising:

a measure of association selection component that selects an appropriate measure of association from among known measures of association, the selection is based on the known measures of association and an item set containing at least one item of input data;

a smoothing component that smoothes at least one item of the item set *via* a selected smoother; and

a measure of association computing component that scores at least one item of the item set by employing the selected measure of association; wherein the measure of association computing component additionally employs at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

**2. (Original)** The system of claim 1, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**3. (Previously Presented)** The system of claim 1, the multiple-score collaborative filtering evaluation method utilizing a highest value score of scores applicable to an item as the single score.

**4. (Original)** The system of claim 3, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**5. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

a filtering component that employs Lift, smoothed *via* prior on counts smoothing techniques, ~~as a measure of association for scoring at least one item of an item set;~~  
~~wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**6. (Previously Presented)** The system of claim 5, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**7. (Previously Presented)** The system of claim 5, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**8. (Previously Presented)** The system of claim 7, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**9. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

a filtering component that employs Lift, smoothed *via* informative priors on measures of association smoothing techniques, ~~as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**10. (Previously Presented)** The system of claim 9, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**11. (Previously Presented)** The system of claim 9, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**12. (Previously Presented)** The system of claim 11, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**13. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

a filtering component that employs Lift, smoothed *via* nonuniform prior smoothing techniques, ~~as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**14. (Previously Presented)** The system of claim 13, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**15. (Previously Presented)** The system of claim 13, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**16. (Previously Presented)** The system of claim 15, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**17. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

a filtering component that employs Weight of Evidence, smoothed *via* cutoff smoothing techniques, ~~as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**18. (Previously Presented)** The system of claim 17, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**19. (Previously Presented)** The system of claim 17, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**20. (Previously Presented)** The system of claim 19, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**21. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

a filtering component that employs Weight of Evidence, smoothed *via* prior on counts smoothing techniques, ~~as a measure of association for scoring at least one item of an item set;~~ the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set; ~~and wherein the filtering component additionally employing at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**22. (Previously Presented)** The system of claim 21, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**23. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

a filtering component that employs Weight of Evidence, smoothed *via* informative priors on measures of association smoothing techniques, ~~as a measure of association for scoring at least one item of an item set;~~ wherein the filtering component additionally employing at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.

**24. (Previously Presented)** The system of claim 23, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**25. (Previously Presented)** The system of claim 23, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**26. (Previously Presented)** The system of claim 25, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**27. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

a filtering component that employs Weight of Evidence, smoothed *via* nonuniform prior smoothing techniques, ~~as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**28. (Previously Presented)** The system of claim 27, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**29. (Previously Presented)** The system of claim 27, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**30. (Previously Presented)** The system of claim 29, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**31. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

~~a filtering component that employs Yule's Q, smoothed via cutoff smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**32. (Previously Presented)** The system of claim 31, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**33. (Previously Presented)** The system of claim 31, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.



**34. (Previously Presented)** The system of claim 33, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**35. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

a filtering component that employs Yule's Q, smoothed *via* prior on counts smoothing techniques, ~~as a measure of association for scoring at least one item of an item set; the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set; and wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**36. (Previously Amended)** The system of claim 35, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**37. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

a filtering component that employs Yule's Q, smoothed *via* informative priors on measures of association smoothing techniques, ~~as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing~~

~~at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**38. (Previously Presented)** The system of claim 37, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**39. (Previously Presented)** The system of claim 37, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**40. (Previously Presented)** The system of claim 39, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**41. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

a filtering component that employs Yule's Q, smoothed *via* nonuniform prior smoothing techniques, ~~as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**42. (Previously Presented)** The system of claim 41, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**43. (Previously Presented)** The system of claim 41, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**44. (Previously Presented)** The system of claim 43, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**45. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

a filtering component that employs tau measures, smoothed *via* cutoff smoothing techniques, ~~as a measure of association for scoring at least one item of an item set;~~  
~~wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**46. (Previously Presented)** The system of claim 45, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**47. (Previously Presented)** The system of claim 45, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**48. (Previously Presented)** The system of claim 47, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**49. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

a filtering component that employs tau measures, smoothed *via* prior on counts smoothing techniques, ~~as a measure of association for scoring at least one item of an item set; the item set comprising a higher order item set wherein more than one item is represented on a left hand side of an association rule applicable to at least one item in the item set; and wherein the filtering component additionally employing at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**50. (Previously Presented)** The system of claim 49, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**51. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

a filtering component that employs tau measures, smoothed *via* informative priors on measures of association smoothing techniques, ~~as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**52. (Previously Presented)** The system of claim 51, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**53. (Previously Presented)** The system of claim 51, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**54. (Previously Presented)** The system of claim 53, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**55. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

a filtering component that employs tau measures, smoothed *via* nonuniform prior smoothing techniques, ~~as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**56. (Previously Presented)** The system of claim 55, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**57. (Previously Presented)** The system of claim 55, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**58. (Previously Presented)** The system of claim 57, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**59. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

~~a filtering component that employs Phi, smoothed via cutoff smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**60. (Previously Presented)** The system of claim 59, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**61. (Previously Presented)** The system of claim 59, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**62. (Previously Presented)** The system of claim 61, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**63. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

a filtering component that employs  $\Phi$ , smoothed *via* prior on counts smoothing techniques, ~~as a measure of association for scoring at least one item of an item set; the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set; and wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**64. (Previously Presented)** The system of claim 63, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**65. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

a filtering component that employs  $\Phi$ , smoothed *via* informative priors on measures of association smoothing techniques, ~~as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~



**66. (Previously Presented)** The system of claim 65, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**67. (Previously Presented)** The system of claim 65, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**68. (Previously Presented)** The system of claim 67, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**69. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

a filtering component that employs Phi, smoothed *via* nonuniform prior smoothing techniques, ~~as a measure of association for scoring at least one item of an item set;~~  
~~wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**70. (Previously Presented)** The system of claim 69, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**71. (Previously Presented)** The system of claim 69, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**72. (Previously Presented)** The system of claim 71, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**73. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

~~a filtering component that employs cross-product, smoothed *via* cutoff smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**74. (Previously Presented)** The system of claim 73, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**75. (Previously Presented)** The system of claim 73, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**76. (Previously Presented)** The system of claim 75, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**77. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

a filtering component that employs cross-product, smoothed *via* prior on counts smoothing techniques, ~~as a measure of association for scoring at least one item of an item set; the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set; and wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**78. (Previously Presented)** The system of claim 77, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**79. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

a filtering component that employs cross-product, smoothed *via* informative priors on measures of association smoothing techniques, ~~as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally~~

~~employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**80. (Previously Presented)** The system of claim 79, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**81. (Previously Presented)** The system of claim 79, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**82. (Previously Presented)** The system of claim 81, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**83. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

~~a filtering component that employs cross-product, smoothed *via* nonuniform prior smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**84. (Previously Presented)** The system of claim 83, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**85. (Previously Presented)** The system of claim 83, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**86. (Previously Presented)** The system of claim 85, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**87. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

a filtering component that employs log of cross-product, smoothed *via* cutoff smoothing techniques, ~~as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**88. (Previously Presented)** The system of claim 87, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**89. (Previously Presented)** The system of claim 87, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**90. (Previously Presented)** The system of claim 89, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**91. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

a filtering component that employs log of cross-product, smoothed *via* prior on counts smoothing techniques, ~~as a measure of association for scoring at least one item of an item set; the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set; and wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**92. (Previously Presented)** The system of claim 91, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**93. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

a filtering component that employs log of cross-product, smoothed *via* informative priors on measures of association smoothing techniques, ~~as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**94. (Previously Presented)** The system of claim 93, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**95. (Previously Presented)** The system of claim 93, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**96. (Previously Presented)** The system of claim 95, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**97. (Currently Amended)** ~~A collaborative filtering~~ The system of claim 1, further comprising:

~~a filtering component that employs log of cross-product, smoothed via nonuniform prior smoothing techniques, as a measure of association for scoring at least one item of an item set; wherein the filtering component additionally employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**98. (Previously Presented)** The system of claim 97, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**99. (Previously Presented)** The system of claim 97, the multiple-score collaborative filtering evaluation method comprising utilizing a highest value score of scores applicable to an item as the single score.

**100. (Previously Presented)** The system of claim 99, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.



**101. (Currently Amended)** A method of data analysis, employing collaborative filtering, implemented as instructions executed on a processor operatively coupled to memory, the method comprising:

receiving an item set containing at least one item of input data;

selecting an appropriate measure of association from among known measures of association, the selection is based on the known measures of association and the item set;

scoring at least one item of the item set by employing the selected measure of association;

selecting at least one additional measure of association based on the item set;

scoring at least one item of the item set by employing the at least one additional measure of association;

smoothing at least one item of the item set *via* a selected smoother; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item;

wherein ~~at least one~~ the instructions [[is]] executed on [[a]] the processor operatively coupled to memory ~~in relation to~~ facilitate the receiving, selecting, scoring, smoothing~~[[,]]~~ and employing, ~~or a combination thereof.~~

**102. (Currently Amended)** ~~[[A]]~~ The method of data analysis claim 101, comprising:

~~creating a~~ wherein the collaborative filtering ~~system that~~ employs Lift, smoothed *via* prior on counts smoothing techniques, as a measure of association for scoring at least one item of ~~[[an]]~~ the item set; and

~~employing at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**103. (Currently Amended)** ~~[[A]]~~ The method of data analysis claim 101, comprising:

~~creating a~~ wherein the collaborative filtering ~~system that~~ employs Lift, smoothed *via* informative priors on measures of association smoothing techniques, as a measure of association for scoring at least one item of ~~[[an]]~~ the item set; and

~~employing at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**104. (Currently Amended)** ~~[[A]]~~ The method of data analysis claim 101, comprising:

~~creating a~~ wherein the collaborative filtering ~~system that~~ employs Lift, smoothed *via* nonuniform prior smoothing techniques, as a measure of association for scoring at least one item of ~~[[an]]~~ the item set; and

~~employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**105. (Currently Amended)** ~~[[A]]~~ The method of data analysis claim 101, comprising:

~~creating a wherein the collaborative filtering system that employs Weight of Evidence, smoothed via cutoff smoothing techniques, as a measure of association for scoring at least one item of [[an]] the item set; and~~

~~employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**106. (Currently Amended)** ~~[[A]]~~ The method of data analysis claim 101, comprising:

~~creating a wherein the collaborative filtering system that employs Weight of Evidence, smoothed via prior on counts smoothing techniques, as a measure of association for scoring at least one item of [[an]] the item set[;], the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set; and~~

~~employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**107. (Currently Amended)** ~~[[A]]~~ The method of ~~data analysis~~ claim 101,  
comprising:

~~creating a~~ wherein the collaborative filtering system that employs Weight of Evidence, smoothed *via* informative priors on measures of association smoothing techniques, as a measure of association for scoring at least one item of ~~[[an]]~~ the item set; and

~~employing at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**108. (Currently Amended)** ~~[[A]]~~ The method of ~~data analysis~~ claim 101,  
comprising:

~~creating a~~ wherein the collaborative filtering system that employs Weight of Evidence, smoothed *via* nonuniform prior smoothing techniques, as a measure of association for scoring at least one item of ~~[[an]]~~ the item set; and

~~employing at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**109. (Currently Amended)** ~~[[A]]~~ The method of ~~data analysis~~ claim 101,  
comprising:

~~creating a~~ wherein the collaborative filtering ~~system that~~ employs Yule's Q,  
smoothed *via* cutoff smoothing techniques, as a measure of association for scoring at  
least one item of ~~[[an]]~~ the item set; and

~~employing at least one multiple score collaborative filtering evaluation method to~~  
~~obtain a single score for an item when more than one measure of association score~~  
~~applies to that item.~~

**110. (Currently Amended)** ~~[[A]]~~ The method of ~~data analysis~~ claim 101,  
comprising:

~~creating a~~ wherein the collaborative filtering ~~system that~~ employs Yule's Q,  
smoothed *via* prior on counts smoothing techniques, as a measure of association for  
scoring at least one item of ~~[[an]]~~ the item set~~[[;]]~~, the item set comprising a higher-order  
item set wherein more than one item is represented on a left-hand side of an  
association rule applicable to at least one item in the item set; and

~~employing at least one multiple score collaborative filtering evaluation method to~~  
~~obtain a single score for an item when more than one measure of association score~~  
~~applies to that item.~~

**111. (Currently Amended)** ~~[[A]]~~ The method of data analysis claim 101, comprising:

~~creating a~~ wherein the collaborative filtering system that employs Yule's Q, smoothed *via* informative priors on measures of association smoothing techniques, as a measure of association for scoring at least one item of ~~[[an]]~~ the item set; and

~~employing at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**112. (Currently Amended)** ~~[[A]]~~ The method of data analysis claim 101, comprising:

~~creating a~~ wherein the collaborative filtering system that employs Yule's Q, smoothed *via* nonuniform prior smoothing techniques, as a measure of association for scoring at least one item of ~~[[an]]~~ the item set; and

~~employing at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**113. (Currently Amended)** ~~[[A]]~~ The method of data analysis claim 101, comprising:

~~creating a~~ wherein the collaborative filtering system that employs tau measures, smoothed *via* cutoff smoothing techniques, as a measure of association for scoring at least one item of ~~[[an]]~~ the item set; and

~~employing at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**114. (Currently Amended) [[A]] The method of data analysis claim 101, comprising:**

~~creating a wherein the collaborative filtering system that employs tau measures, smoothed *via* prior on counts smoothing techniques, as a measure of association for scoring at least one item of [[an]] the item set[:;], the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set; and~~

~~employing at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**115. (Currently Amended) [[A]] The method of data analysis claim 101, comprising:**

~~creating a wherein the collaborative filtering system that employs tau measures, smoothed *via* informative priors on measures of association smoothing techniques, as a measure of association for scoring at least one item of [[an]] the item set; and~~

~~employing at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**116. (Currently Amended)** ~~[[A]]~~ The method of data analysis claim 101, comprising:

~~creating a wherein the~~ collaborative filtering system that employs tau measures, smoothed *via* nonuniform prior smoothing techniques, as a measure of association for scoring at least one item of ~~[[an]]~~ the item set; and

~~employing at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**117. (Currently Amended)** ~~[[A]]~~ The method of data analysis claim 101, comprising:

~~creating a wherein the~~ collaborative filtering system that employs Phi, smoothed *via* cutoff smoothing techniques, as a measure of association for scoring at least one item of ~~[[an]]~~ the item set; and

~~employing at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**118. (Currently Amended)** ~~[[A]]~~ The method of data analysis claim 101, comprising:

~~creating a wherein the~~ collaborative filtering system that employs Phi, smoothed *via* prior on counts smoothing techniques, as a measure of association for scoring at least one item of ~~[[an]]~~ the item set~~[[;]]~~, the item set comprising a higher-order item set



wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set; and

~~employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**119. (Currently Amended) [[A]] The method of data analysis claim 101, comprising:**

~~creating a wherein the collaborative filtering system that employs Phi, smoothed via informative priors on measures of association smoothing techniques, as a measure of association for scoring at least one item of [[an]] the item set; and~~

~~employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**120. (Currently Amended) [[A]] The method of data analysis claim 101, comprising:**

~~creating a wherein the collaborative filtering system that employs Phi, smoothed via nonuniform prior smoothing techniques, as a measure of association for scoring at least one item of [[an]] the item set; and~~

~~employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**121. (Currently Amended)** ~~[[A]]~~ The method of data analysis claim 101, comprising:

~~creating a~~ wherein the collaborative filtering system that employs cross-product, smoothed *via* cutoff smoothing techniques, as a measure of association for scoring at least one item of ~~[[an]]~~ the item set; and

~~employing at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**122. (Currently Amended)** ~~[[A]]~~ The method of data analysis claim 101, comprising:

~~creating a~~ wherein the collaborative filtering system that employs cross-product, smoothed *via* prior on counts smoothing techniques, as a measure of association for scoring at least one item of ~~[[an]]~~ the item set~~[[;]]~~, the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set; and

~~employing at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**123. (Currently Amended)** ~~[[A]]~~ The method of ~~data analysis~~ claim 101, comprising:

~~creating a~~ wherein the collaborative filtering ~~system that~~ employs cross-product, smoothed *via* informative priors on measures of association smoothing techniques, as a measure of association for scoring at least one item of ~~[[an]]~~ the item set; and

~~employing at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**124. (Currently Amended)** ~~[[A]]~~ The method of ~~data analysis~~ claim 101, comprising:

~~creating a~~ wherein the collaborative filtering ~~system that~~ employs cross-product, smoothed *via* nonuniform prior smoothing techniques, as a measure of association for scoring at least one item of ~~[[an]]~~ the item set; and

~~employing at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**125. (Currently Amended)** ~~[[A]]~~ The method of ~~data analysis~~ claim 101, comprising:

~~creating a~~ wherein the collaborative filtering ~~system that~~ employs log of cross-product, smoothed *via* cutoff smoothing techniques, as a measure of association for scoring at least one item of ~~[[an]]~~ the item set; and

~~employing at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**126. (Currently Amended) [[A]]** The method of data analysis claim 101, comprising:

~~creating a wherein the collaborative filtering system that employs log of cross-product, smoothed via prior on counts smoothing techniques, as a measure of association for scoring at least one item of [[an]] the item set[[:]], the item set comprising a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set; and~~

~~employing at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**127. (Currently Amended) [[A]]** The method of data analysis claim 101, comprising:

~~creating a wherein the collaborative filtering system that employs log of cross-product, smoothed vi informative priors on measures of association smoothing techniques, as a measure of association for scoring at least one item of [[an]] the item set; and~~

~~employing at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**128. (Currently Amended)** ~~[[A]]~~ The method of data analysis claim 101,  
comprising:

~~creating a wherein the collaborative filtering system that employs log of cross-product, smoothed via nonuniform prior smoothing techniques, as a measure of association for scoring at least one item of [[an]] the item set; and~~

~~employing at least one multiple score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.~~

**129. (Currently Amended)** A collaborative filtering system, the system  
comprising:

a processor;

a memory;

instructions stored in the memory and executed by the processor, the instructions  
comprising:

a measure of association selection component that selects an appropriate  
measure of association from among known measures of association, the  
selection is based on the known measures of association and an item set  
containing at least one item of input data;

a smoothing component that smoothes at least one item of the item set via a selected smoother;

a measure of association computing component that scores at least one item of the item set by employing the selected measure of association; wherein the measure of association computing component additionally employs at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item; and

a filtering component that employs Lift as a measure of association for scoring at least one item of ~~[[an]]~~ the item set.

**130. (Previously Presented)** A kiosk employing the system of claim 129.

**131. (Previously Presented)** A search engine employing the system of claim 129.

**132. (Previously Presented)** A set-top box employing the system of claim 129.

**133. (Previously Presented)** A television guide employing the system of claim 129.

**134. (Previously Presented)** A video guide employing the system of claim 129.

**135. (Previously Presented)** A media guide employing the system of claim 129

**136. (Previously Presented)** A music guide employing the system of claim 129.

**137. (Previously Presented)** A merchandizing system employing the system of claim 129.

**138. (Previously Presented)** A targeted advertising system employing the system of claim 129.

**139. (Previously Presented)** A recommendation system employing the system of claim 129.

**140. (Previously Presented)** A commerce server employing the system of claim 129.

**141. (Currently Amended)** A collaborative filtering system, the system comprising:

a processor;

a memory;

instructions stored in the memory and executed by the processor, the instructions comprising:

a measure of association selection component that selects an appropriate measure of association from among known measures of association, the selection is based on the known measures of association and an item set containing at least one item of input data ;

a smoothing component that smoothes at least one item of the item set via a selected smoother;

a measure of association computing component that scores at least one item of the item set by employing the selected measure of association; wherein the measure of association computing component additionally employs at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item; and

a filtering component that employs informative priors on a measure of association for smoothing the measure of association utilized in collaborative filtering.



**142. (Currently Amended)** A method of data analysis, employing collaborative filtering, implemented as instructions executed by a processor operatively coupled to memory, the method comprising:

receiving an item set containing at least one item of input data;

selecting an appropriate measure of association from among known measures of association, the selection is based on the known measures of association and the item set;

scoring at least one item of the item set by employing the selected measure of association;

selecting at least one additional measure of association based on the item set;

scoring at least one item of the item set by employing the at least one additional measure of association;

smoothing at least one item of the item set via a selected smoother; and

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item, wherein employing Lift is employed as a measure of association in  
[[a]] the collaborative filtering system for scoring at least one item of an item set.

**143. (Currently Amended)** A method of data analysis, employing collaborative filtering, implemented as instructions executed by a processor operatively coupled to memory, the method comprising:

receiving an item set containing at least one item of input data;

selecting an appropriate measure of association from among known measures of association, the selection is based on the known measures of association and the item set;

scoring at least one item of the item set by employing the selected measure of association;

selecting at least one additional measure of association based on the item set;

scoring at least one item of the item set by employing the at least one additional measure of association;

smoothing at least one item of the item set via a selected smoother;

employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item; and

employing informative priors on a measure of association for smoothing the measure of association utilized in the collaborative filtering.

**144. (Currently Amended)** A data analysis system employing collaborative filtering, the system comprising:

means for receiving an item set containing at least one item of input data;

means for selecting, based on the item set, an appropriate measure of association from among known measures of association;

means for scoring at least one item of the item set by employing the selected measure of association;

means for selecting at least one additional measure of association based on the item set;

means for scoring at least one item of the item set by employing the at least one additional measure of association;

means for smoothing at least one item of the item set via a selected smoother;  
and

means for employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item, the means for collaborative filtering based, at least in part, on employing Lift as a measure of association for scoring at least one item.

**145. (Withdrawn)** A data packet transmitted between two or more computer components that facilitates collaborative filtering, the data packet comprised of, at least in part, collaborative filtering data based, at least in part, on employing Lift as a measure of association for scoring at least one item.

**146. (Previously Presented)** A computer readable medium having stored thereon computer executable components of the system of claim 129.

**147. (Previously Presented)** A device employing the method of claim 142 comprising at least one selected from the group consisting of a computer, a server, and a handheld electronic device.

**148. (Previously Presented)** A device employing the system of claim 129 comprising at least one selected from the group consisting of a computer, a server, and a handheld electronic device.

**149. (Previously Presented)** A computer readable medium having stored thereon computer executable instructions for performing the method of claim 142.

**150. (Previously Presented)** The system of claim 1, the smoothing component selects, based on the item set, the selected smoother from among known smoothers.

**151. (Currently Amended)** The system of claim 1, the measure of association selection component selects at least one additional measure of association based on the item set, and a filtering component scores at least one item of the item set by employing the at least one additional measure of association.

**152. (Previously Presented)** The method of claim 101, further comprising receiving a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**153. (Previously Presented)** The method of claim 101, further comprising utilizing a highest value score of scores applicable to an item as the single score of the multiple-score collaborative filtering evaluation method.

**154. (Previously Presented)** The method of claim 153, further comprising receiving a higher-order item set wherein more than one item is represented on a left-hand side of an association rule applicable to at least one item in the item set.

**155. (Previously Presented)** The method of claim 101, the selected smoother is selected, based on the item set, from among known smoothers.

**156. (Canceled)**

**157. (Previously Presented)** A collaborative filtering system embodied on a computer readable medium, comprising:

means for receiving an item set containing at least one item of input data;

means for selecting, based on the item set, an appropriate measure of association from among known measures of association;

means for scoring at least one item of the item set by employing the selected measure of association;

means for selecting at least one additional measure of association based on the item set;

means for scoring at least one item of the item set by employing the at least one additional measure of association;

means for smoothing at least one item of the item set *via* a selected smoother;  
and

means for employing at least one multiple-score collaborative filtering evaluation method to obtain a single score for an item when more than one measure of association score applies to that item.